



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,917	01/25/2001	Noriaki Matsui	1232-4675	6157

27123 7590 10/04/2005
MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

EXAMINER

THOMPSON, JAMES A

ART UNIT PAPER NUMBER

2624

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,917

Applicant(s)

MATSUI ET AL.

Examiner

James A. Thompson

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,15,17-23,26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1,3-9,15,17-23,26 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 15 August 2005 have been fully considered but they are not persuasive.

Examiner appreciates Applicant's detailed explanation of the alleged differences between the present invention and the prior art of record. Examiner agrees that the prior art of record does not teach reading the second reference member *only once*, as taught in the present specification, but instead teaches repeated reading of said second reference member. However, the present claims are not limited such that said second reference member is read only once. Claim 1, for example, presently recites *inter alia* "a controller adapted to determine whether the time measured by said timer reaches the predetermined time, in a case that the predetermined time has not elapsed, control said image sensor to scan said first reference member illuminated by said light source for acquiring a coefficient for uniformly changing level of the electrical signals, and in a case that the predetermined time has elapsed, control said image sensor to scan said second reference member illuminated by said light source for acquiring shading correction data in a main scanning direction." In other words, before a predetermined time has elapsed, the first reference member is scanned to acquire said correction coefficients, and after said predetermined time, the second reference member is scanned to acquire said correction coefficients. Claim 1, as presently recited, does not preclude *further* scanning of said second reference member to obtain updated correction coefficients, which occurs after said predetermined time has

Art Unit: 2624

elapsed. Applicant is respectfully reminded that, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-9, 15, 17-23 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumashiro (US Patent 5,864,408) in view of Kerschner (US Patent 5,995,243).

Regarding claims 1 and 15: Kumashiro discloses an apparatus (figure 1 and figure 2 of Kumashiro) comprising a light source adapted to illuminate an original (column 8, lines 25-29 of Kumashiro); an image scanner (figure 1(21) of Kumashiro) adapted to scan said original (column 6, lines 23-26 of Kumashiro) and output electrical signals (column 6, lines 33-36 of Kumashiro); a first reference member (figure 1(14) and column 6, lines 1-3 of Kumashiro) which is arranged in an original scanning area of said image sensor in a sub-scanning direction (column 6, lines 3-8 and lines 20-25 of Kumashiro); a second reference member (figure 1(20) of Kumashiro) which is arranged in an area other than the original scanning area of

Art Unit: 2624

said image sensor (column 6, lines 15-18 of Kumashiro) in the sub-scanning direction (column 6, lines 23-26 of Kumashiro); a memory (figure 2(35(portion)) of Kumashiro) adapted to store a predetermined number of sheets that are read (column 12, lines 30-34 of Kumashiro) since said light source is turned on until a maximum of electrical signals output from said image sensor at the time said light source is turned on changes a predetermined rate (figure 4a; figure 5a; and column 8, lines 23-30 of Kumashiro); a timer (figure 2(35(portion)) of Kumashiro) adapted to measure a number of sheets read since said light source is turned on (column 12, lines 30-34 of Kumashiro); and a controller (figure 2(35(portion)) of Kumashiro) adapted to determine whether the number of sheets measured by said timer reaches the predetermined number of sheets (column 12, lines 30-34 of Kumashiro), in the case that the predetermined number of sheets has not been read, control said image sensor to scan (column 11, lines 57-61 of Kumashiro) said first reference member illuminated by said light source for acquiring a coefficient for uniformly changing level of the electrical signals (column 11, lines 61-65 of Kumashiro), and in a case that the predetermined number of sheets have been read, control said image sensor to scan said second reference member illuminated by said light source for acquiring shading correction data in a main scanning direction (column 12, lines 30-38 of Kumashiro).

Kumashiro teaches that the CPU (figure 2(35) of Kumashiro) controls the overall system (column 6, lines 60-63 of Kumashiro). Therefore, the memory, timer and controller are the specific portions of the CPU, along with the associated computer

Art Unit: 2624

memory and embodied software, that perform the functions corresponding to the memory, timer and controller.

Kumashiro further discloses that the amount of light emitted from the light source decreases with time (figure 4a; figure 5a; and column 8, lines 23-30 of Kumashiro). The number of sheets that are read directly corresponds to the amount of time that has elapsed from when the light source was turned on (figure 5a and column 8, lines 25-30 of Kumashiro).

However, Kumashiro does not specifically disclose that a predetermined time from an on time is stored and measured, instead of a predetermined number of sheets.

Kerschner discloses calibrating the illumination conditions of a scanner periodically, and thus at a predetermined time from an on time (column 3, lines 62-67 of Kerschner).

Kumashiro and Kerschner are combinable because they are from the same field of endeavor, namely the control of digital scanning devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to calibrate the scanner illumination specifically based on a predetermined time, as taught by Kerschner, instead of indirectly basing said predetermined time on the number of sheets scanned, as taught by Kumashiro. The motivation for doing so would have been that, after a particular amount of time, the light level of a scanner light source decreases by a specific amount (figure 5a and column 8, lines 23-30 of Kumashiro), thus it would have been logical to one of ordinary skill in the art at the time of the invention to store and measure the amount of time directly. Therefore, it would have been obvious to combine Kerschner with Kumashiro to obtain the invention as specified in claims 1 and 15.

Further regarding claim 15: The apparatus of claim 1 performs the method of claim 15.

Regarding claims 3 and 17: Kumashiro discloses a correction unit (figure 2(24) and column 6, lines 30-34 of Kumashiro) which uses the shading correction data to perform shading correction (column 6, lines 38-47 of Kumashiro) on the electrical signals output from said image sensor (column 6, lines 39-45 of Kumashiro).

Regarding claims 4 and 18: Kumashiro discloses that said first and second reference members comprise white plates (column 6, line 1 and line 15 of Kumashiro).

Regarding claims 5 and 19: Kumashiro discloses that said first reference member is arranged at an end portion of a main scanning direction (column 6, lines 1-3 of Kumashiro).

Regarding claim 6: Kumashiro discloses that the determination by said controller is performed before each original sheet is read (column 9, lines 24-31 of Kumashiro).

Regarding claim 20: Kumashiro discloses that said determination is performed before each original sheet is read (column 9, lines 24-31 of Kumashiro).

Regarding claims 7 and 21: Kumashiro discloses a feeder (column 5, lines 51-56 of Kumashiro) capable of successively supplying a plurality of original sheets (column 5, lines 64-67 of Kumashiro), wherein said controller performs said determination (column 9, lines 24-31 of Kumashiro) in a case that said feeder supplies each original sheet to a predetermined position (column 6, lines 11-14 of Kumashiro).

Regarding claims 8 and 22: Kumashiro discloses determining whether an original sheet is a first document sheet after the light source is turned on (figure 4a("First Sheet") and column

Art Unit: 2624

10, lines 63-67 of Kumashiro), wherein in a case that the original sheet is determined to be the first original sheet, said controlling of said image sensor to scan the second reference member illuminated by said light source is executed before the start of read of the original sheet regardless of a result of determining whether the measured time reaches the predetermined time (column 10, lines 63-67 of Kumashiro).

Regarding claim 9: Kumashiro discloses that, in a case that the first original sheet is to be read after said light source is turned on (figure 4a("First Sheet") and column 10, lines 63-67 of Kumashiro), and the predetermined time has not elapsed (column 12, lines 30-34 of Kumashiro), said controller skips controlling said image sensor to scan said first reference member illuminated by said light source for acquiring the coefficient for uniformly changing level of the electrical signals (column 8, line 66 to column 9, line 6 of Kumashiro). The second reference member is used for the reference white when the first sheet is read (column 8, line 66 to column 9, line 2 of Kumashiro). Reading the first reference member is skipped until after the first document has been fully read (column 9, lines 2-6 of Kumashiro).

Regarding claim 23: Kumashiro discloses that, in a case that the original sheet is determined to be the first document sheet (figure 4a("First Sheet") and column 10, lines 63-67 of Kumashiro), said controlling of said image sensor to scan the first reference member illuminated by said light source for acquiring a coefficient for uniformly changing level of the electrical signals is skipped regardless of the result of determining whether the measured time reaches the predetermined time (column 8, line 66 to column 9, line 6 of Kumashiro). The

Art Unit: 2624

second reference member is used for the reference white when the first sheet is read (column 8, line 66 to column 9, line 2 of Kumashiro). Scanning the first reference member is skipped until after the first document sheet has been fully read (column 9, lines 2-6 of Kumashiro). Skipping the first reference member is always done for the first document sheet, and is therefore done regardless of the result of determining whether the measured time reaches the predetermined time.

Regarding claims 26 and 27: Kumashiro discloses an image reading apparatus (figure 1 and figure 2 of Kumashiro) comprising a light source adapted to illuminate an original (column 8, lines 25-29 of Kumashiro); an image scanner (figure 1 (21) of Kumashiro) adapted to scan said original (column 6, lines 23-26 of Kumashiro) and output electrical signals (column 6, lines 33-36 of Kumashiro); a reference member (figure 1(20) of Kumashiro) which is arranged in an area other than an original scanning area of said image sensor (column 6, lines 15-18 of Kumashiro) in the sub-scanning direction (column 6, lines 23-26 of Kumashiro); a memory (figure 2(35(portion)) of Kumashiro) adapted to store a predetermined number of sheets that are read (column 12, lines 30-34 of Kumashiro) since said light source is turned on until a maximum of electrical signals output from said image sensor at the time said light source is turned on changes a predetermined rate (figure 4a; figure 5a; and column 8, lines 23-30 of Kumashiro); a timer (figure 2(35 (portion)) of Kumashiro) adapted to measure a number of sheets read since said light source is turned on (column 12, lines 30-34 of Kumashiro); and a controller (figure 2(35(portion)) of Kumashiro) adapted to determine whether the number of sheets measured by said timer reaches the predetermined number of

Art Unit: 2624

sheets (column 12, lines 30-34 of Kumashiro), and in a case that the predetermined number of sheets have been read, control said image sensor to scan said reference member illuminated by said light source for acquiring shading correction data in a main scanning direction (column 12, lines 30-38 of Kumashiro).

Kumashiro teaches that the CPU (figure 2(35) of Kumashiro) controls the overall system (column 6, lines 60-63 of Kumashiro). Therefore, the memory, timer and controller are the specific portions of the CPU, along with the associated computer memory and embodied software, that perform the functions corresponding to the memory, timer and controller.

Kumashiro further discloses that the amount of light emitted from the light source decreases with time (figure 4a; figure 5a; and column 8, lines 23-30 of Kumashiro). The number of sheets that are read directly corresponds to the amount of time that has elapsed from when the light source was turned on (figure 5a and column 8, lines 25-30 of Kumashiro).

However, Kumashiro does not specifically disclose that a predetermined time from an on time is stored and measured, instead of a predetermined number of sheets.

Kerschner discloses calibrating the illumination conditions of a scanner periodically, and thus at a predetermined time from an on time (column 3, lines 62-67 of Kerschner).

Kumashiro and Kerschner are combinable because they are from the same field of endeavor, namely the control of digital scanning devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to calibrate the scanner illumination specifically based on a predetermined time, as taught by Kerschner, instead of indirectly basing said predetermined time on the number of

Art Unit: 2624

sheets scanned, as taught by Kumashiro. The motivation for doing so would have been that, after a particular amount of time, the light level of a scanner light source decreases by a specific amount (figure 5a and column 8, lines 23-30 of Kumashiro), thus it would have been logical to one of ordinary skill in the art at the time of the invention to store and measure the amount of time directly. Therefore, it would have been obvious to combine Kerschner with Kumashiro to obtain the invention as specified in claims 26 and 27.

Further regarding claim 27: The apparatus of claim 26 performs the method of claim 27.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624



22 September 2005



Thomas D.
~~LEE~~ LEE
PRIMARY EXAMINER